



Assimilation of OC-CCI data into the coupled ocean-biogeochemical model MITgcm-REcoM

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MITgcm-REcoM is used to simulate biogeochemistry in a global ocean configuration. The Regulated Ecosystem Model REcoM simulates biogeochemical processes using two phytoplankton groups (small phytoplankton and diatoms) in a quota-formulation using separate variables for carbon and chlorophyll. The model has been shown to produce realistic phytoplankton concentrations with spatially constant parameters controlling the processes. To further improve the model representation we assimilate observational data from OC-CCI. The final goal is to estimate spatially varying parameters so that the biogeochemical processes can adapt to regional environmental conditions. As a first step, we assimilate chlorophyll-a data and assess the direct influence of the data assimilation on the concentrations of the biogeochemical model variables. The data assimilation is performed using an ensemble Kalman filter provided by the Parallel Data Assimilation Framework (PDAF, <http://pdaf.awi.de>). We discuss the data assimilation component and the influence of the assimilation on the model fields.